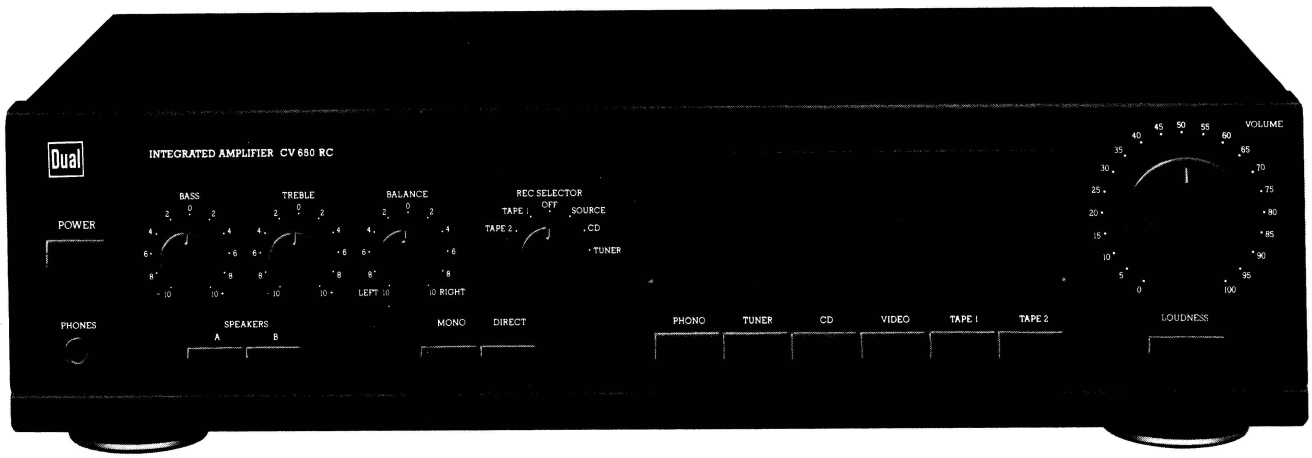
Service-Anleitung
Service Manual
Instructions de Service

CV 650 RC



Technische Daten (typische Werte)	**Specifications** (typical values)	**Caractéristiques techniques** (valeurs types)	**Dati tecnici** (valori tipici)	**CV 650 RC**
Ausgangsleistung Sinusleistung (8/4 Ω DIN 1 kHz) Musikleistung (8/4 Ω 1 kHz)	**Power output** RMS continuous power output (8/4 Ω DIN 1 kHz) music power (8/4 Ω 1 kHz)	**Puissance de sortie** Puissance sinus (8/4 ohms DIN 1 kHz) Puissance musique (8/4 ohms 1 kHz)	**Potenza d'uscita** capacità sinusoidale (8/4 ohm DIN 1 kHz) Potenza musicale (8/4 ohm 1 kHz)	 2× 85 W/2×110 W 2×110 W/2×130 W
Leistungsbandbreite	**Frequency response**	**Bande de puissance**	**Banda di potenza**	10–80000 Hz
Klirrfaktor bei 2/3 Leistung (1 kHz)	**Harmonic distortion** at 2/3 power (1 kHz)	**Distorsion** à 2/3 de puissance (1 kHz)	**Distorsione armonica** a 2/3 de rendimento (1 kHz)	< 0,01 %
Fremdspannungsabstand bezogen auf Nennleistung Phono-Eingang Hochpegel-Eingänge (CD, VIDEO, TAPE, TUNER)	**Signal/noise ratio** referred to rated power output Phono input High-level inputs (CD, VIDEO, TAPE, TUNER)	**Rapport non pondéré son/bruit** par rapport à la puissance nominale Entrée Phono Entrées haut niveau (CD, VIDEO, TAPE, TUNER)	**Selettivitá** riferita alla potenza nominale ingresso phono ingressi ad alte impedenze (CD, VIDEO, TAPE, TUNER)	 72 dB 95 dB
Übersprechdämpfung	**Crosstalk attenuation**	**Diaphonie**	**Diafonia**	80 dB
Eingänge CD, VIDEO, TAPE, TUNER PHONO	**Inputs** CD, VIDEO, TAPE, TUNER PHONO	**Entrées** CD, VIDEO, TAPE, TUNER PHONO	**Ingressi** CD, VIDEO, TAPE, TUNER PHONO	 200 mV/47 kΩ 2,5 mV/47 kΩ
Ausgänge Druckklemmen für zwei Lautsprecherpaare 1-Koaxialbuchse ¼ inch für Kopfhörer TAPE 1/TAPE 2	**Outputs** Clamping terminals for two speaker pairs 1 coaxial jack, ¼ inch, for headphones TAPE 1/TAPE 2	**Sorties** Bornes à pression pour deux paires de haut-parleurs 1 prise coaxiale ¼" pour écouteurs TAPE 1/TAPE 2	**Uscite** morsetti di pressione per due coppie di diffusori 1 presa coassiale ¼" per cuffia TAPE 1/TAPE 2	 8–16 Ohm
Leistungsaufnahme (maximal)	**Power input** (maximum)	**Consommation de courant** (maximum)	**Potenza assorbita** (massimo)	 400 Watt
Netzspannung Model Europa Model USA/Kanada	**Mains voltage** European model US/Canadian model	**Voltage secteur** Modèle Europe Modèle USA/Canada	**Tensione di rete** modello Europa modello Stati Uniti/Canada	 230 V/50 Hz 115 V/60 Hz
Maße (Breite × Höhe × Tiefe)	**Dimensions** (width × height × depth)	**Dimensions** (largeur × hauteur × profondeur)	**Dimensioni** (larghezza × altezza × profondità)	 440×122×245 mm

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921 670 1092

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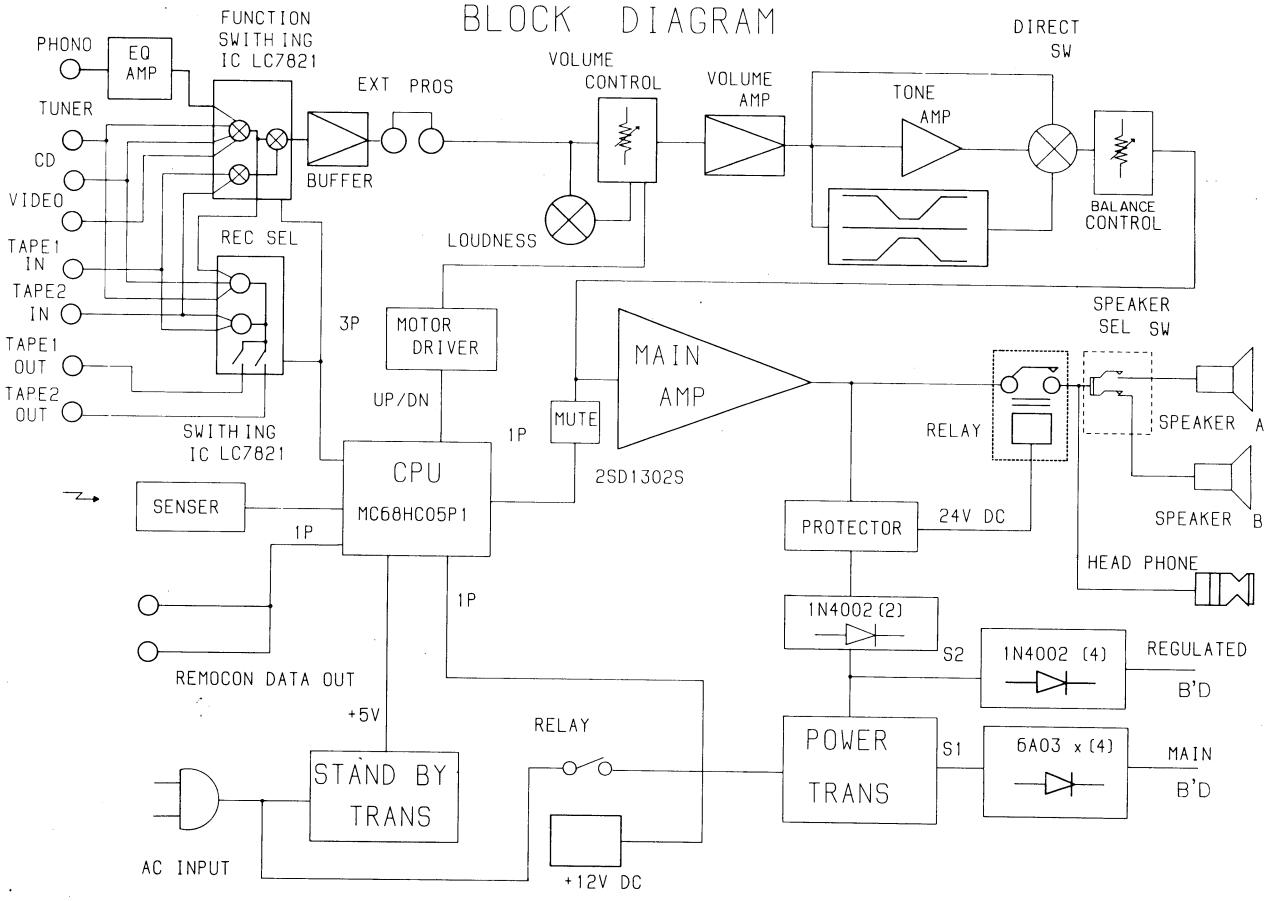
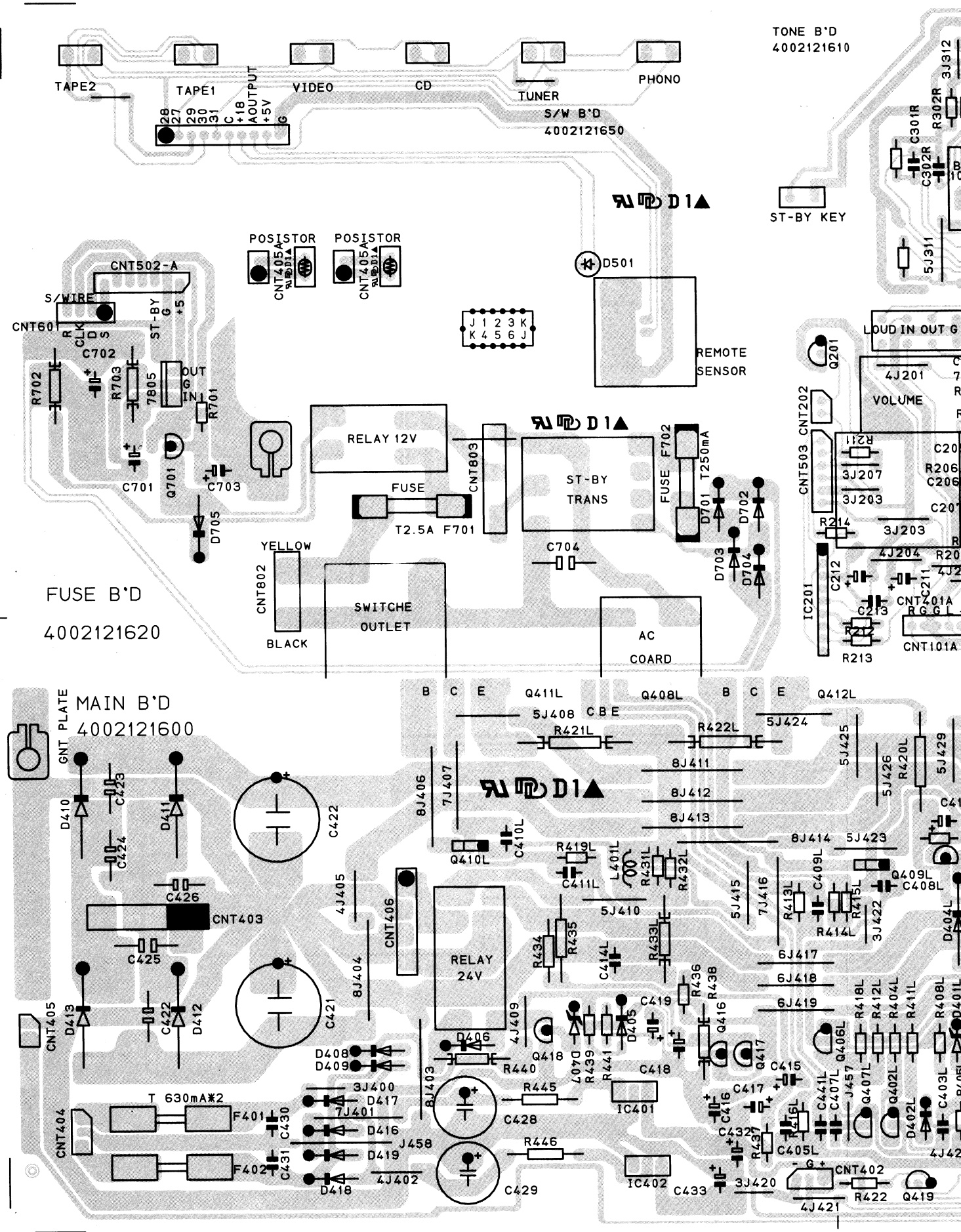


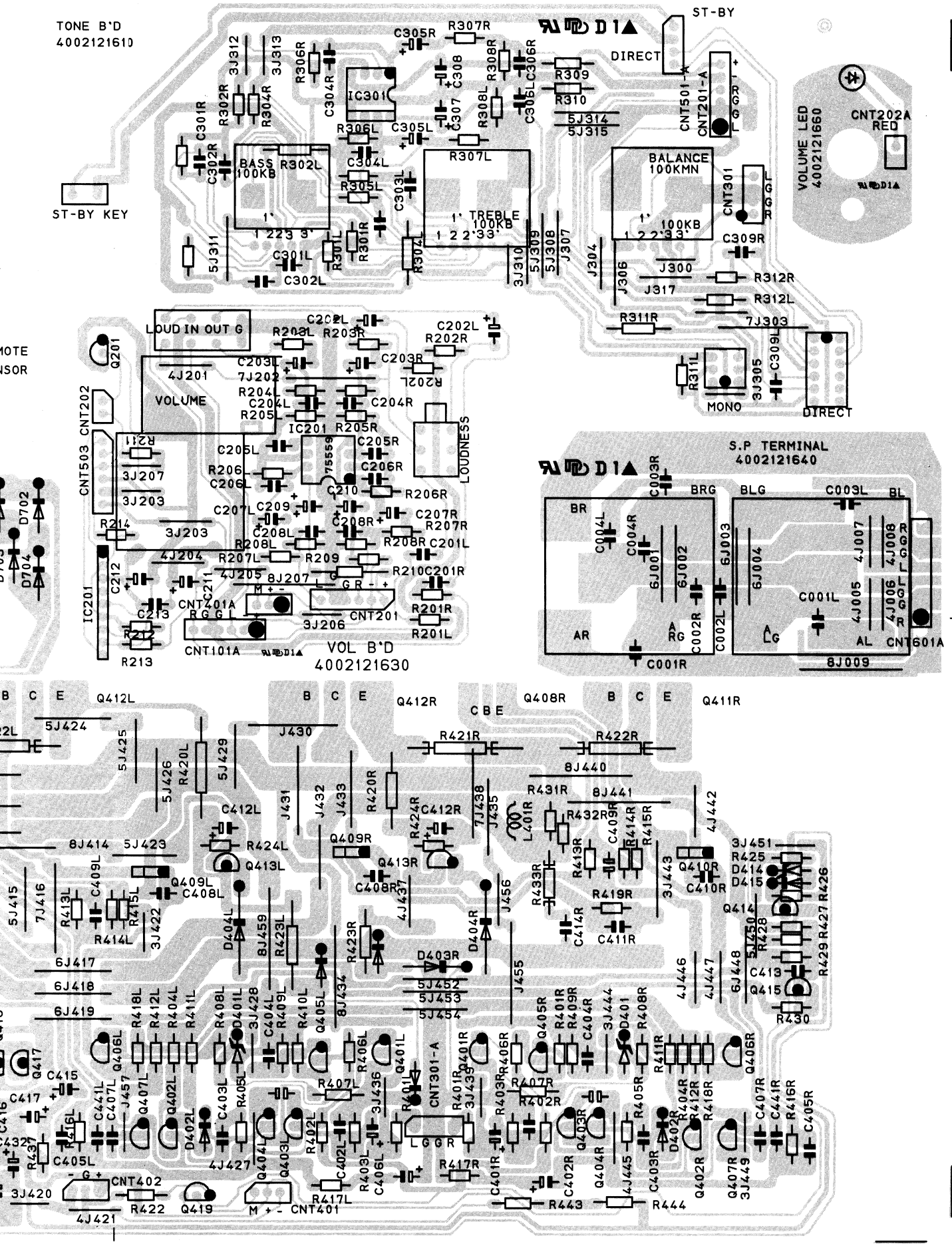
LC 7821 IC 107 (SWITCHING IC)

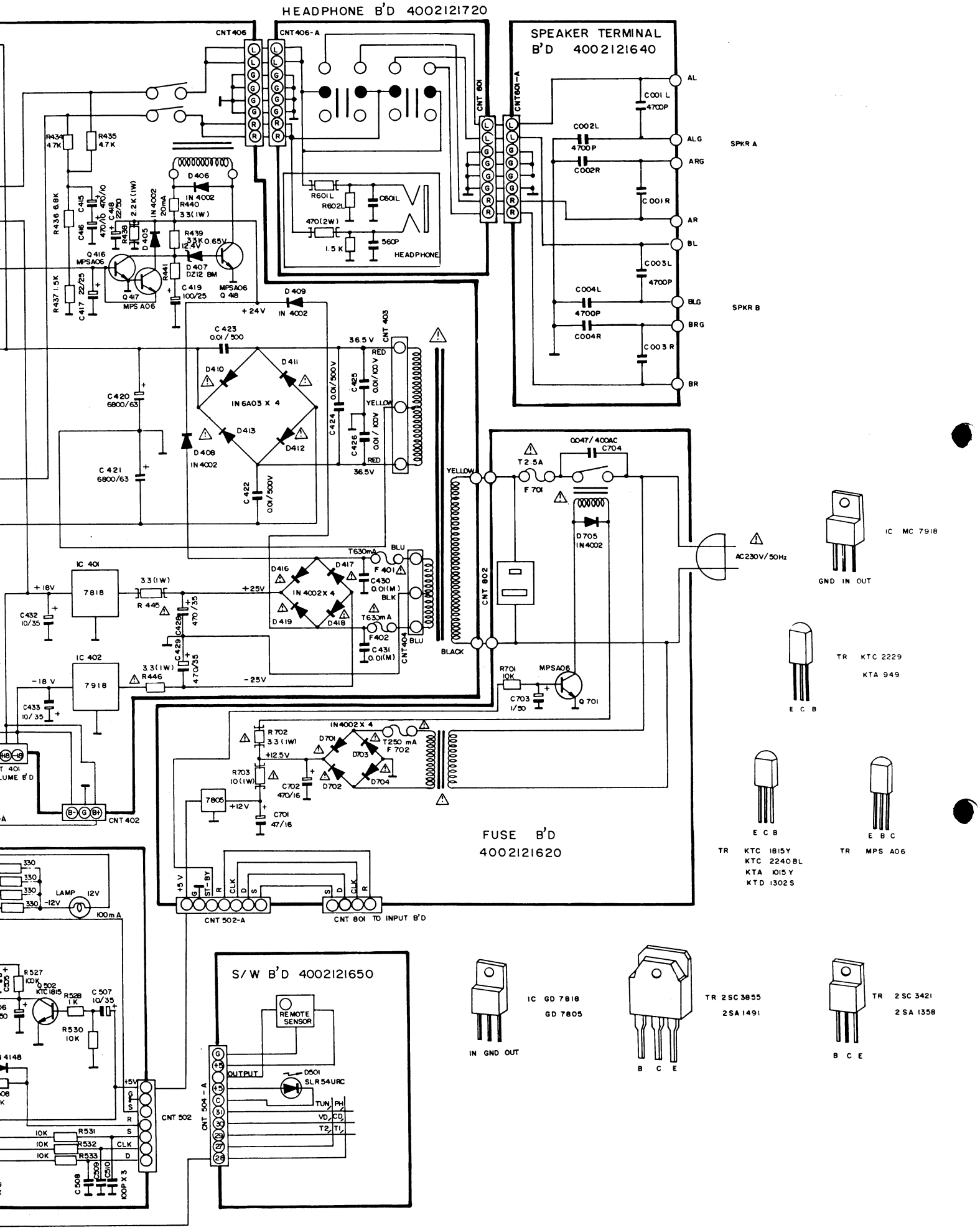
PIN No.	Terminal	Description
1	NC	
2	CD	Input/output terminals of
3	TUNER	audio signal of left channel
4	SOURCE	
5		Control to the inside
6	TAPE 1	analog switch at the serial
7	TAPE 2	data
8		
9	TAPE 1 OUT	
10	TAPE 2 OUT	
11		
12	Vee	Negative power supply terminal (– 18 V)
13	STROBE	Serial Control terminal
14	DATA	Connect terminal of
15	CLOCK	MB88P 515B
16	Vss	
17	S	High Level (+ 18 V)
18	RES	Reset terminal When power is turned ON the Condition of the analog switch is not determined, but when this terminal is „L" all analog switches are OFF.
19	VDD	Power Supply terminal (– 18 V)
20	DATA OUTPUT	
21	TAPE 2 OUT	Input/Output terminals of
22	TAPE 1 OUT	audio signal of right channel
23		
24	TAPE 2	Control to the inside analog
25	TAPE 1	switch at the serial date
26		
27	SOURCE	
28	TUNER	
29	CD	
30	NC	

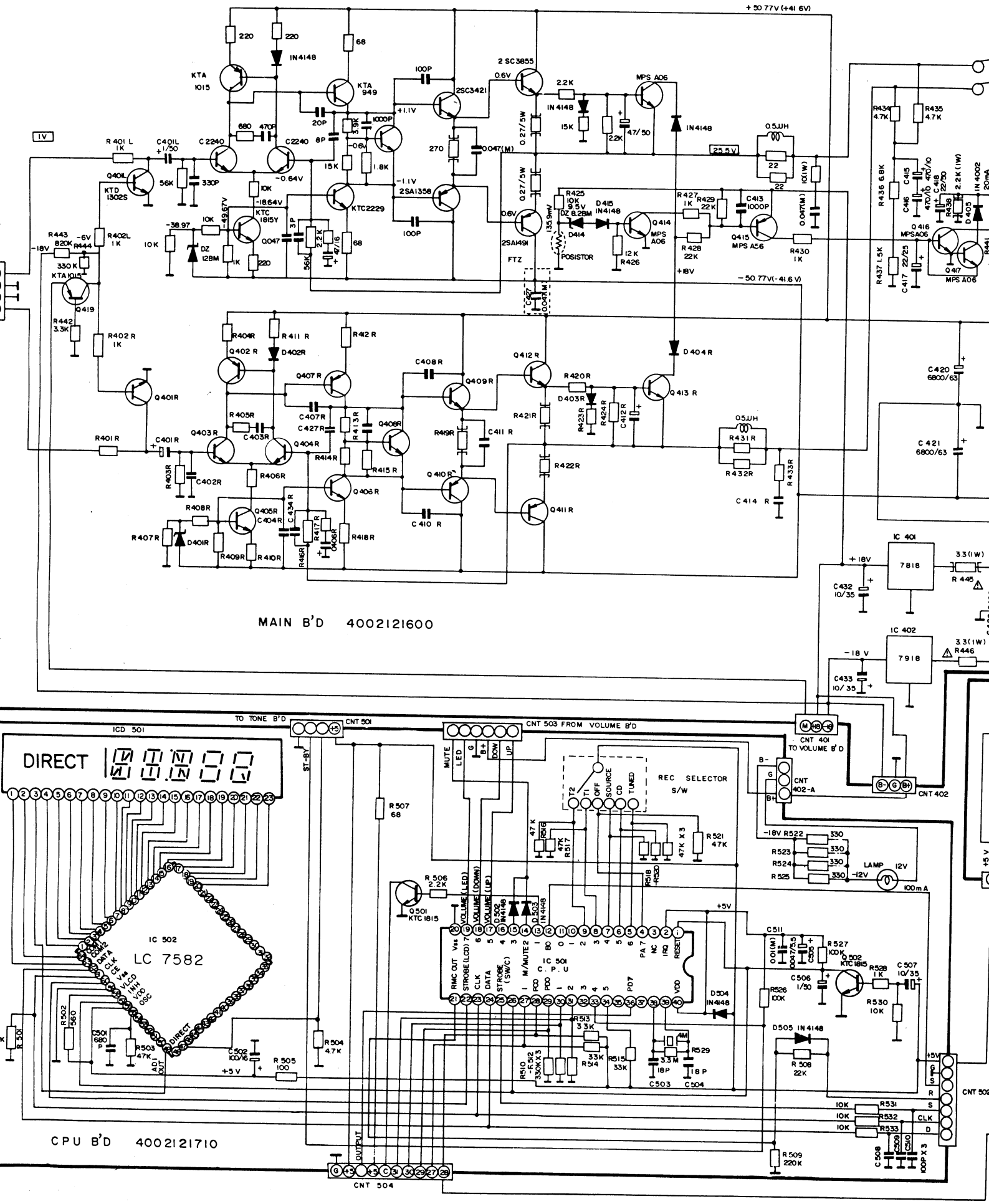
(MC68HC05C4P: IC 501)

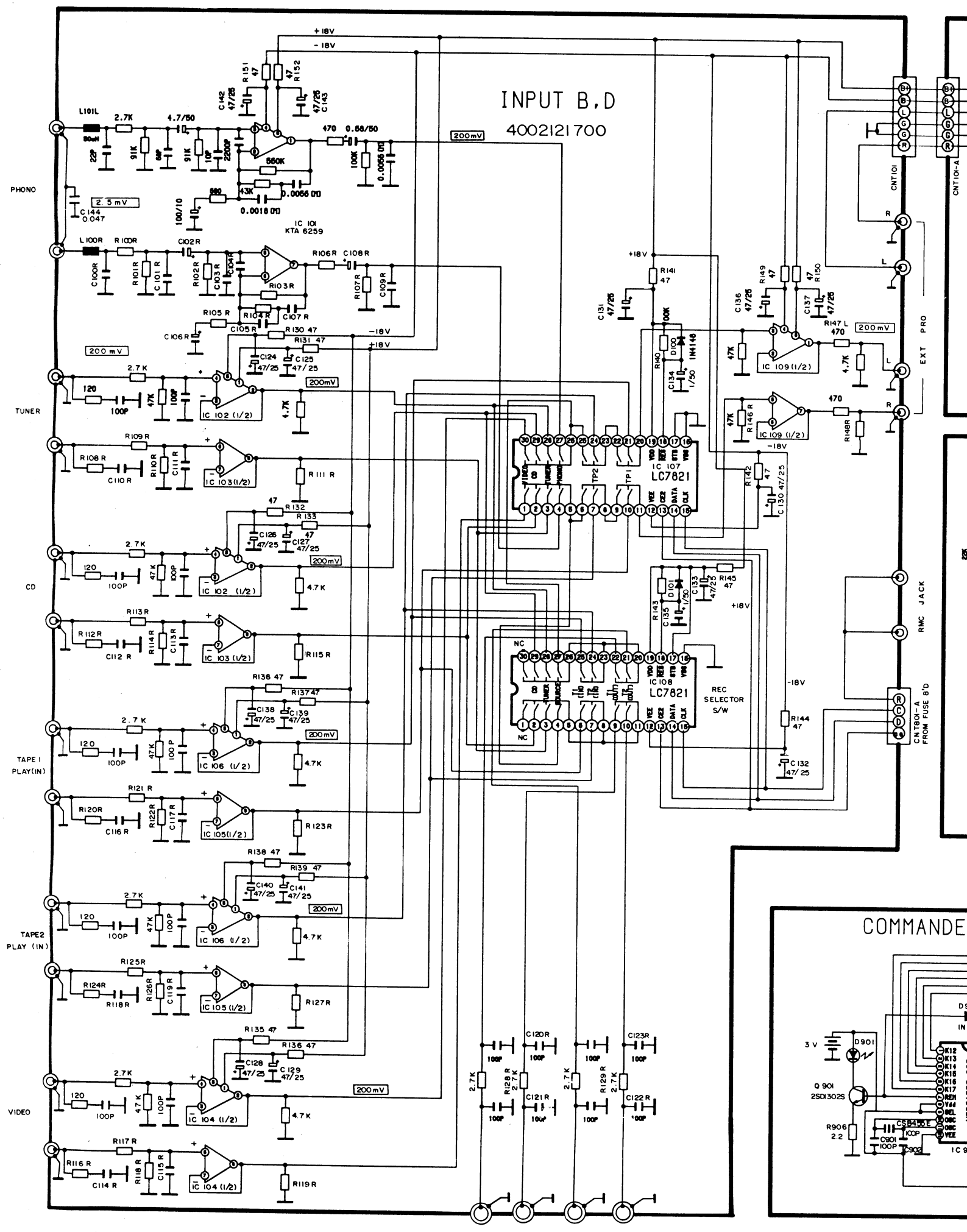
No.	Terminal	Operating	Remark
1	Reset		Q502
2	IRQ	5V	
3	NC		
4	PA7 (OFF)		
5	PA6 (TUNER) REC	5V	
6	PA5 (CD) SELECTOR	0V	
7	PA4 (SOURCE)		
8	PA3 (T1)		
9	PA2 (T2)		
10	PA1 (GND)		
11	PA0 (GND)	5V	
12	PB0 (STAND-BY RELAY)	0V	
13	PB1 (STAND-BY LED)	0V	Q501
14	PB2 (MAIN MUTE) 200 m sec		
15	PB3 (REC SEL MUTE) 6 m sec		
16	PB4 NC		
17	PB5 (VOL UP)		
18	PB6 (VOL DOWN)		
19	PB7 (VOL LED)		Q201
20	VSS		
21	PC7 (RMC OUT)		
22	PC6 (STROBE LCD)		
23	PC5 (CLK)		
24	PC4 (DATA)		
25	PC3 (STROBE SW/IC)		
26	PC2 (INH)		
27	PC1 (KEY SCAN 2)		KEY MATRIX
28	PC0 (KEY SCAN 1)	5V	KEY MATRIX
29	PD0 (KEY IN 3)	0V	KEY MATRIX
30	PD1 (KEY IN 2)		KEY MATRIX
31	PD2 (KEY IN 1)		KEY MATRIX
32	PD3 (NC)		
33	PD4		
34	PD5 +5V (AC CORD OFF CHECK)	0V	
35	TCMP (NC)		
36	PD7 (RMC IN)		
37	TCAP (NC)		
38	OSC2		4 MHz
39	OSC1		OSC 4MHz
40	VDD		

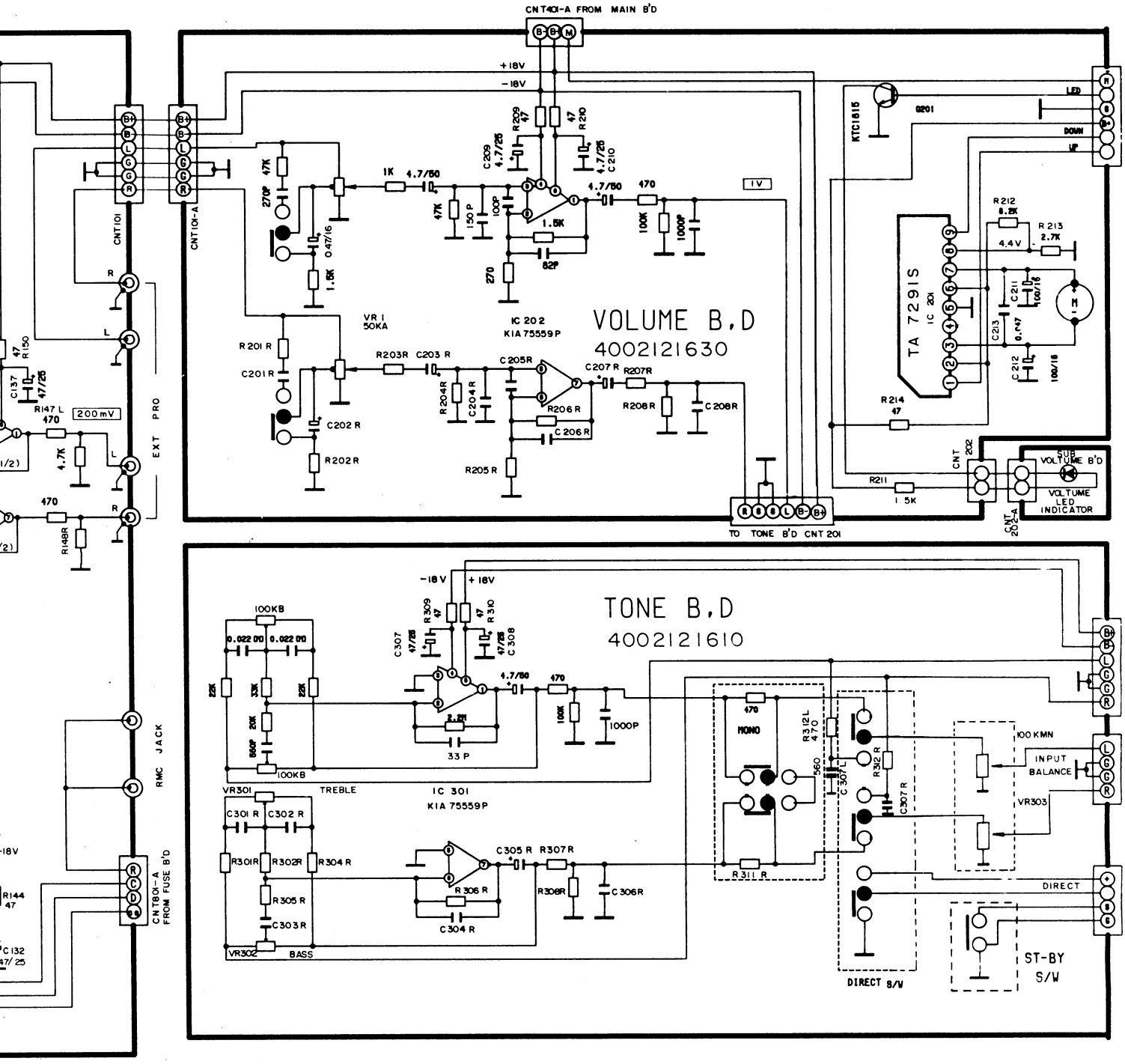

TONE B'D
4002121610
TAPE2
TAPE1
VIDEO
CD
TUNER
PHONO
S/W B'D
4002121650
ST-BY KEY
POSISTOR
POSISTOR
CNT502-A
S/WIRE
CNT601
D501
REMOTE
SENSOR
LOUD IN OUT G
VOLUME
RELAY 12V
FUSE
T2.5A F701
ST-BY
TRANS
FUSE F702 T250mA
FUSE B'D
4002121620
YELLOW
BLACK
SWITCHE
OUTLET
AC
COARD
MAIN B'D
4002121600
GNT PLATE
RELAY
24V
CNT403
CNT404
CNT405
CNT406
T 630mA*2
F401
F402
IC401
IC402
IC201
CNT101A
CNT202
CNT503
CNT802
CNT803
CNT402

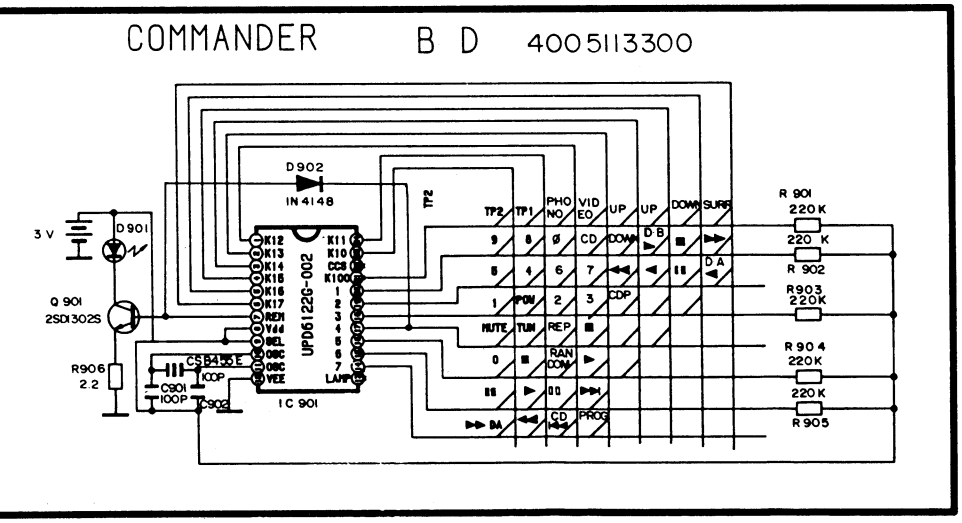

TONE B'D
4002121610
ST-BY KEY
BASS R302L 100KB
TREBLE 100KB
BALANCE 100KMN
VOLUME
LOUD IN OUT G
CNT503 CNT202
IC201
LOUDNESS
VOL B'D
4002121630
ST-BY
DIRECT
MONO
VOLUME LED
4002121660
CNT202A
RED
S.P TERMINAL
4002121640
CNT601A
Q412L
Q412R
Q408R
Q411R
R421R
R422R
8J440
8J441
CNT301-A
CNT402
CNT401
R422
Q419
4J421
3J420


HEADPHONE B'D 4002121720
CNT406
CNT406-A
SPEAKER TERMINAL
B'D 4002121640
CNT 801
CNT801-A
AL
ALG
ARG
AR
BL
BLG
BRG
BR
SPKR A
SPKR B
C001L 4700P
C002L 4700P
C002R
C001R
C003L 4700P
C004L 4700P
C004R
C003R
R601L
R602L
C601L
470(2W)
1.5K
560P
HEADPHONE
R434 47K
R435 4.7K
R436 6.8K
R437 1.5K
C415
C416 470/16
C417 22/25
C418 22/50
R438 2.2K(1W)
D405
IN4002
20mA
D406
IN 4002
R440 33(1W)
R439 33K 0.65V 12.4V
D407 DZ12 BM
R441
C419 100/25
Q416 MPSA06
Q417 MPS A06
MPSA06 Q 418
D409
IN 4002
+24V
C423 0.01/500
D410
D411
IN 6A03 X 4
D413
D412
D408 IN4002
C420 6800/63
C421 6800/63
C422 0.01/500V
C424 0.01/500V
C425 0.01/100V
C426 0.01/100V
CNT 403
36.5V
RED
YELLOW
RED
36.5V
YELLOW
BLACK
CNT 802
0.047/400AC
C704
T2.5A
F 701
D705 IN4002
AC230V/50Hz
IC 401
7818
+18V
3.3(1W)
R 445
C432 10/35
C428 470/35
+25V
D416
D417
IN 4002 X 4
D419
D418
T630mA
BLU
F 401
C430 0.01(M)
BLK
T630mA
F402
C431 0.01(M)
BLU
CNT404
IC 402
7918
-18 V
3.3(1W)
R446
C429 470/35
-25V
C433 10/35
R701 10K
MPSA06
Q 701
C703 1/50
IC MC 7918
GND IN OUT
TR KTC 2229
KTA 949
E C B
R 702 3.3 (1W)
+12.5V
IN4002 X 4
D701
D703
D702
D704
T250 mA
F 702
R703 10(1W)
C702 470/16
7805
+12V
C701 47/16
FUSE B'D
4002121620
E C B
TR KTC 1815Y
KTC 2240BL
KTA 1015Y
KTD 1302S
E B C
TR MPS A06
CNT 402
CNT 502-A
CNT 801 TO INPUT B'D
+5V
ST-BY
CLK
S
R
330
330
330
330
LAMP 12V
-12V
100mA
R527 100K
Q 502 KTC1815
R528 1K
C 507 10/35
R530 10K
4148
S/W B'D 4002121650
REMOTE SENSOR
OUTPUT
D501 SLR54URC
TUN
PH
VD
CD
T2
T1
CNT 504-A
CNT 502
10K R531
10K R532
10K R533
C508
C509
C510
100P X 3
IC GD 7818
GD 7805
IN GND OUT
TR 2SC3855
2SA1491
B C E
TR 2SC 3421
2SA 1358
B C E


MAIN B'D 4002121600
CPU B'D 4002121710
DIRECT
IC 502
LC 7582
IC 501
C.P.U
REC SELECTOR S/W
TO TONE B'D
CNT 501
CNT 503 FROM VOLUME B'D
CNT 401 TO VOLUME B'D
CNT 402
CNT 402-A
CNT 504
CNT 502
IC 401
7818
IC 402
7918
LAMP 12V 100mA
+50.77V(+41.6V)
-50.77V(-41.6V)
+18V
-18V
+5V
25.5V


INPUT B.D
4002121700
PHONO
TUNER
CD
TAPE I PLAY(IN)
TAPE2 PLAY (IN)
VIDEO
IC 101 KTA 6259
IC 102 (1/2)
IC 103(1/2)
IC 104 (1/2)
IC 105(1/2)
IC 106 (1/2)
IC 107 LC7821
IC 108 LC7821
IC 109 (1/2)
REC SELECTOR S/W
EXT PRO
RMC JACK
CNT101-A
CNT801-A FROM FUSE B'D
COMMANDE
TAPE I REC(OUT)
TAPE 2 REC (OUT)





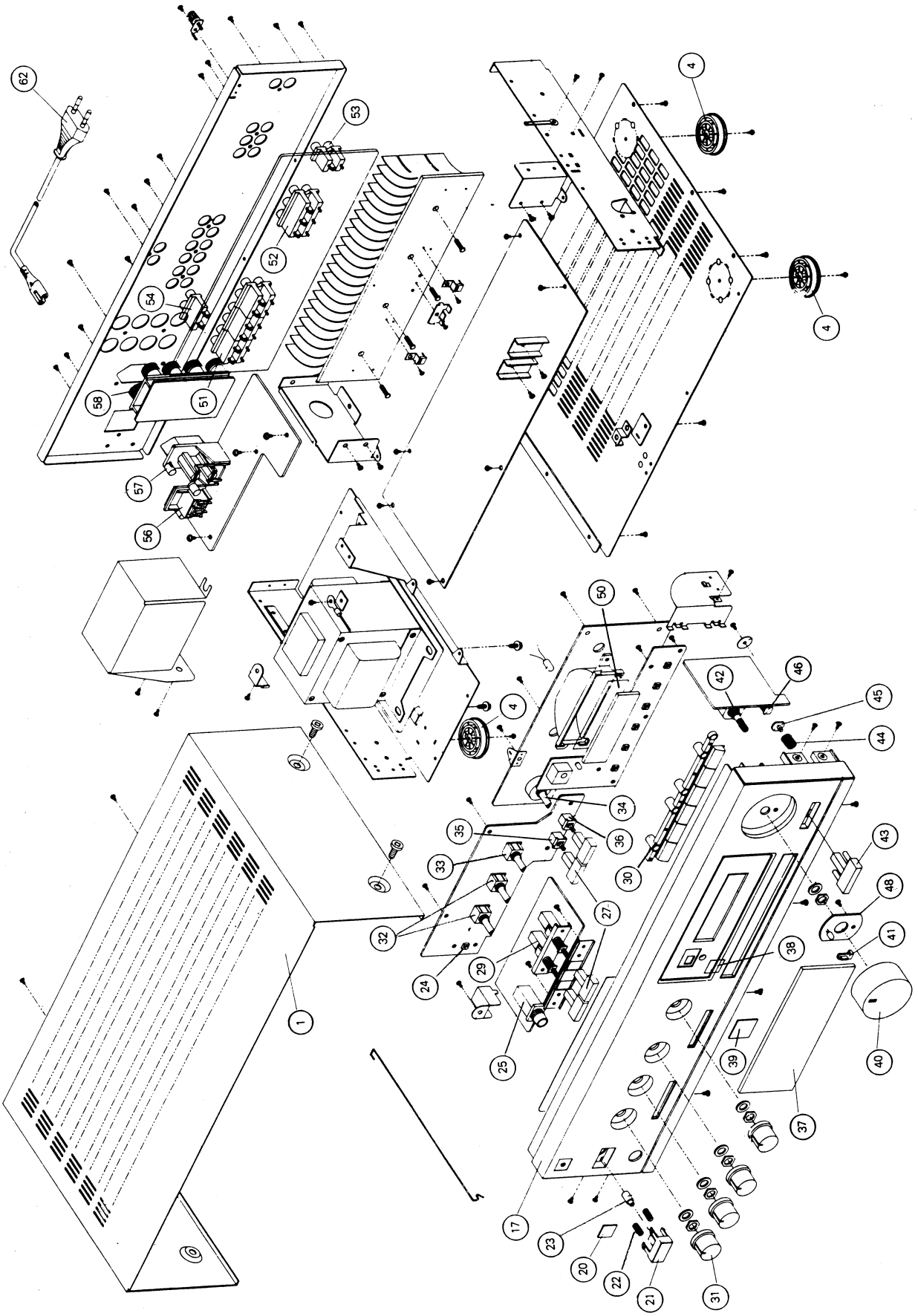
NOTES 1. Resistance values are indicated in ohms unless otherwise specified (K = 1,000 M = 1,000,000)

2. Capacitance values are shown in microfarads unless otherwise noted (P = micro micro farads.)

CAUTION: Safety precautions to be followed during servicing

1) Since those parts marked with ⚠ are critical parts for safety use the one described parts list.

2) Before returning the receiver to the customer make appropriate leakage current or resistance measurements to determine that exposed parts are properly insulated from the supply circuit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22
21
31
1

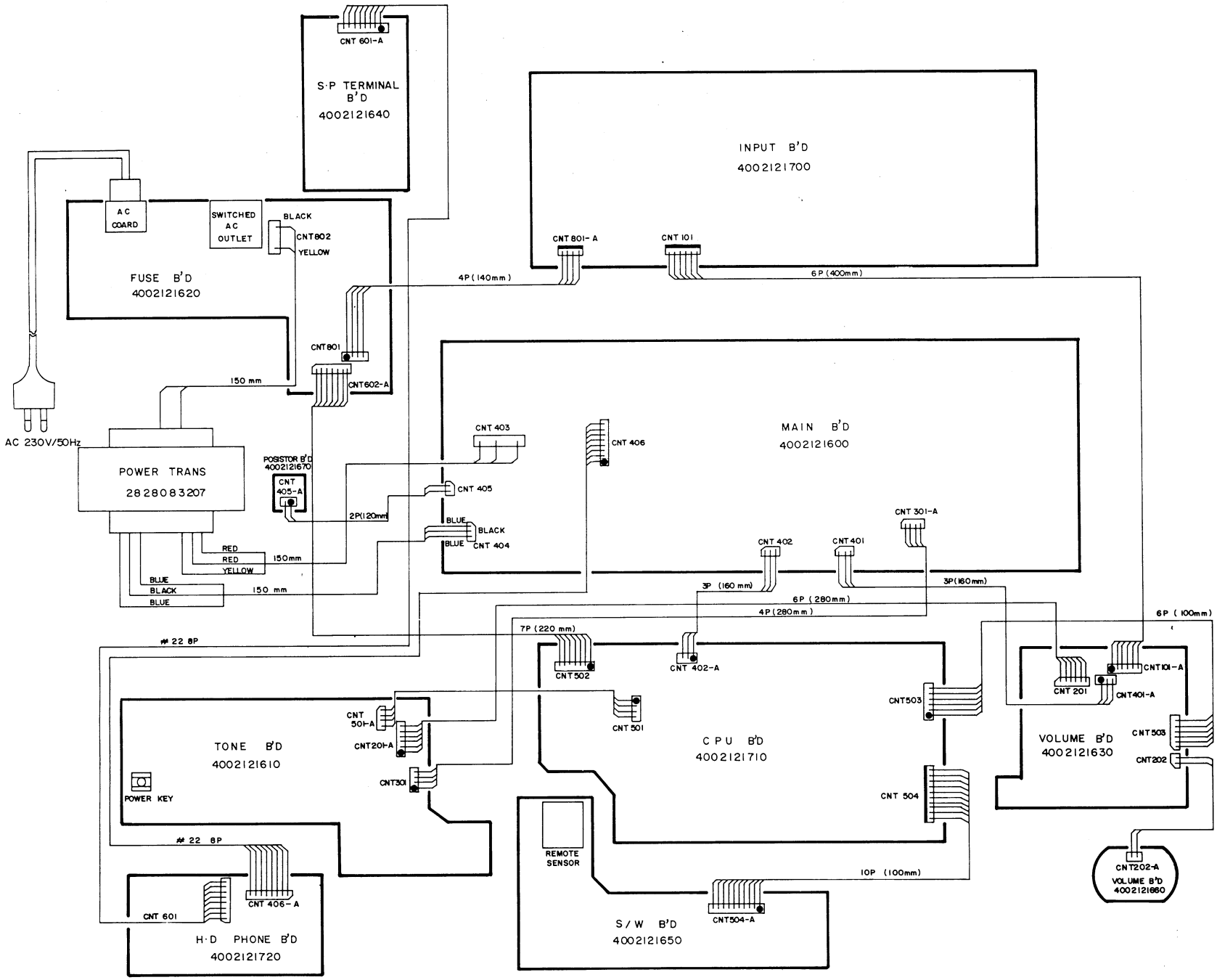
INPUT B'D
4002121700
CPU B'D
4002121710
LAMP
H.D PHONE JACK
4002121720
PHONO
TUNER
CD
VIDEO
IC104
IC107
IC108
IC109
IC101
IC102
IC103
IC105
IC106
IC502
LC7582
IC501
CNT504
CNT503
CNT601
CNT401A
CNT402-A
CNT101
CNT601-A
CNT502
J605
J604
J603
J602
J601
SPKR A S/W
SPKR B S/W
MUTE LED
UP
DOWN
OUTPUT
+5V
+18
LCD
GUIDE
DIRECT
COM2
COM1
RESONATOR
REC SELECT S/W
TUNER
CD
OFF
T1
T2
POWER KEY
STRO
CLK
ST-BY
DATA
VSS
VDD
CERES
RMC JACK
REC T1 PLAY
REC T2 PLAY
JACK1
JACK2
JACK3
JACK4

Ersatzteile · Replacement parts · Pièces détachées · CV 650

Pos.	Art.-Nr.	Bezeichnung
1	284 320	Gehäuseblech
4	289 241	Fuß
17	289 243	Frontblende CV 650
20	283 750	DUAL-Zeichen
21	289 244	Taste POWER
22	286 890	Druckfeder
23	289 245	Taste INSERT
24	286 901	Schalter
25	283 705	Kopfhörerbuchse
27	289 246	Taste
29	289 247	Schalter 2-fach
30	289 248	Taste FUNKTION
31	289 249	Knopf
32	284 664	Steller 100 K
33	283 676	Steller
34	289 250	Drehschalter
35	283 675	Schalter
36	283 674	Schalter
37	289 252	Fenster
38	289 253	Dämpfungsfolie
39	289 254	Sensorfenster
40	289 255	Knopf VOLUME
41	289 256	Volume Leuchtstab
42	289 257	Steller mit Motor
43	289 258	Taste LOAD
44	287 459	Feder
45	289 259	Taste INSERT
46	289 260	Schalter
48	289 705	Volume-LED-Platte
49	289 261	Lampe
50	289 262	Dämpfungsfolie
51	283 670	Cinchbuchse
52	289 263	Cinchbuchse 6-fach
53	289 264	Cinchbuchse 2-fach
54	289 265	Cinchbuchse
56	289 266	Netzbuchse
57	289 267	Anschlußbuchse
58	289 269	Lautsprecherklemmen
62	279 596	Netzkabel Europa
		Grundplatte
C 420	282 070	Elyt-Kond. 6800 UF/63 V
C 421	282 070	Elyt-Kond. 6800 UF/63 V
L 401	286 910	Spule 0,5 UH
D 401	282 063	Diode DZ 12 BM
D 402	223 906	Diode 1 N 4148
bis		
D 404	223 906	Diode 1 N 4148
D 405	226 501	Diode 1 N 4002
D 406	226 501	Diode 1 N 4002
D 407	282 063	Diode DZ 12 BM
D 408	226 501	Diode 1 N 4002
D 409	226 501	Diode 1 N 4002
D 414	282 146	Diode DZ 8,2
D 415	223 906	Diode 1 N 4148
D 416	226 501	Diode 1 N 4002
bis		
D 419	226 501	Diode 1 N 4002
IC 401	287 676	IC GD 7818
IC 402	287 677	IC MC 7918 CT

Pos.	Art.-Nr.	Bezeichnung
Q 401	286 905	Transistor MPS A 56
Q 402	282 077	Transistor KTA 1015 Y
Q 403	282 052	Transistor KTC 2240 BL
Q 404	282 052	Transistor KTC 2240 BL
Q 405	282 076	Transistor KTC 1815 Y
Q 406	282 053	Transistor KTC 2229 Y
Q 407	282 054	Transistor KTA 949 Y
Q 408	286 904	Transistor MPS A 06
Q 409	283 733	Transistor 2 SC 3421
Q 410	283 732	Transistor 2 SA 1358
Q 411	282 055	Transistor 2 SA 1491
Q 412	282 056	Transistor 2 SC 3855
Q 413	286 904	Transistor MPS A 06
Q 414	286 904	Transistor MPS A 06
Q 415	286 905	Transistor MPS A 56
Q 416	286 904	Transistor MPS A 06
bis		
Q 418	286 904	Transistor MPS A 06
Q 419	282 077	Transistor KTA 1015 Y
	289 275	Netztrafo CV 650
		UP-Platte
D 501	289 458	LED SLR 54 URC
D 502	223 906	Diode 1 N 4148
bis		
D 505	223 906	Diode 1 N 4148
IC 501	289 272	IC CPU MC 68 C 05 P
IC 502	283 111	IC LC 7582
	289 270	IR-Empfänger KRM 33
	281 411	Quartz 4 MHz
Q 501	282 076	Transistor KTC 1815 Y
Q 502	282 076	Transistor KTC 1815 Y
		Eingangsplatte
L 101	282 079	Spule 50 UH
D 100	223 906	Diode 1 N 4148
D 101	223 906	Diode 1 N 4148
IC 101	289 271	IC KIA 6259
IC 102	283 707	IC KIA 75559 P
bis		
IC 105	283 707	IC KIA 75559 P
		Tastenplatte
IC 106	286 912	IC LC 7821
IC 107	286 912	IC LC 7821
IC 108	283 707	IC KIA 75559 P
IC 109	283 707	IC KIA 75559 P
D 100	223 906	Diode 1 N 4148
D 101	223 906	Diode 1 N 4148
		VOLUME-Platte
IC 201	287 489	IC TA 7291 S
Q 201	282 076	Transistor KTC 1815 Y
D 801	289 458	LED SLR 54 URC (Volume LED)
		STANDBY-Platte
D 701	226 501	Diode 1 N 4002
bis		
D 705	226 501	Diode 1 N 4002
IC 701	283 727	IC GD 7805
Relais	289 274	Relais
Q 701	286 904	Transistor
	286 909	Trafo STAND BY

Änderungen vorbehalten! Subject to change! Sous réserve de modification!


CNT 601-A
S·P TERMINAL B'D
4002121640
INPUT B'D
4002121700
CNT 801-A
CNT 101
6P (400mm)
4P (140mm)
AC COARD
SWITCHED AC OUTLET
BLACK
CNT802
YELLOW
FUSE B'D
4002121620
CNT801
CNT602-A
150 mm
AC 230V/50Hz
POWER TRANS
2828083207
POSISTOR B'D
4002121670
CNT 405-A
2P(120mm)
CNT 403
CNT 406
MAIN B'D
4002121600
CNT 405
BLUE
BLACK
BLUE
CNT 404
RED
RED
YELLOW
150mm
BLUE
BLACK
BLUE
150 mm
CNT 301-A
CNT 402
CNT 401
3P (160 mm)
3P(160mm)
6P (280mm)
4P(280mm)
6P (100mm)
#22 8P
7P (220 mm)
CNT502
CNT 402-A
CNT 201
CNT101-A
CNT401-A
CNT503
CNT 501
CNT 501-A
CNT201-A
CNT301
TONE B'D
4002121610
POWER KEY
CPU B'D
4002121710
VOLUME B'D
4002121630
CNT503
CNT202
CNT 504
#22 8P
REMOTE SENSOR
10P (100mm)
CNT202-A
VOLUME B'D
4002121680
CNT 406-A
CNT 601
H·D PHONE B'D
4002121720
CNT504-A
S/W B'D
4002121650